Psychosocial factors influencing risk-taking in middle age for STIs

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ABSTRACT

Objectives

To increase knowledge of the psychosocial factors influencing sexual risk taking for sexually transmitted infections (STIs) among adults in late middle age**.**

Methods

Individual interviews were conducted either face to face or by telephone with 31 heterosexual men and women aged between 45 and 65. They were recruited from NHS sexual health services (n=16) and council run culture and leisure facilities (n=15) in a large Scottish city. A total of 18 women and 13 men were interviewed. All interviews were transcribed in full and thematically analysed.

Results

Analysis detailed important psychosocial and sociocultural factors; the prioritisation of intimacy above and beyond concerns about risks for STI in sexual partnerships; the importance of unwanted pregnancy in shaping risk perceptions throughout the life course; vulnerability associated with periods of relationship transition (e.g., bereavement, divorce or separation); social norms and cultural expectations relating to age appropriate sexual and health seeking behaviours.

Conclusions

This is the first qualitative study to examine factors associated with sexual risk-taking among heterosexual adults in late middle age in the UK. Many factors associated with sexual risk taking are similar to those reported within other populations. However, we also detail population-specific factors which should be considered in terms of the development of interventions for ‘at risk’ older adults, or the tailoring of wider behaviour change interventions to this specific age group.

BACKGROUND

The rates of sexually transmitted infections (STIs) are rising among adults aged over 45 within the UK and other Western countries.[1, 2] Surveillance data from England shows an increase among men and women for gonorrhoea and chlamydia since 2010.[2] In addition, the rates of newly diagnosed HIV among heterosexuals aged over 50 rose from 1:14 in 2004 to 1:5 in 2013.[3] Although those under 25 and men who have sex with men (MSM) experience most risk for STI within the UK,[2,3] several sociocultural factors may explain the rising incidence of STIs among older adults.

Firstly, there have been population changes in relationship patterns; 30-40% of adults in England and Wales divorce between the ages of 35 and 59 and increasing numbers of middle-aged adults remain unmarried.[4] Secondly, 12% of men and 9% of women aged 45-54 report a new sexual partner within the previous year, highlighting substantial rates of midlife repartnering.[5] Thirdly, there have been general health improvements with ageing; although interest in sex appears to decline with age and poor health,[6,7] healthy life expectancy projections for the UK suggest that around 80% of adults' lives will be spent in very good or good general health.[8] Most adults up to age 70 were sexually active in the last year,[7] and most men up to age 74 and women up to age 64 report sexual satisfaction.[6]

In addition to these sociocultural issues, limited evidence highlights the importance of other psychosocial and behavioural factors. Similar to younger women, many middle-aged women prioritise intimate relationships over their sexual health and are vulnerable to risk-taking during post relationship transitional periods.[9] To date, no equivalent research has addressed the experiences of older heterosexual men. Evidence demonstrates that older adults are less likely than young people to use condoms.[10] Equally, evidence from the USA suggests that older adults undermine their HIV-related knowledge by associating risk with adolescence.[11] The evidence linked to older adults' sexual risk-taking is largely based on quantitative cross-sectional surveys. In the UK the National Survey of Sexual Attitudes and Lifestyles (NATSAL) recently increased its upper age limit to 74 therefore quantitative data should now be available.[5] However, where it exists, international qualitative evidence is mostly limited to women, black and ethnic minority (BME) populations within the USA and is often focused on HIV. Qualitative research is needed to focus upon the intersection of psychosocial, generational, historical and social contexts and to deepen the understanding of sexual risk-taking among middle-aged and older adults. The absence of experiential data, particularly among middle aged and older men restrains the evidence base on which to extend the limited interventions currently in existence for this population.[12]

AIMS

The study aimed to increase understanding of psychosocial factors influencing late middle-aged adults' risk-taking for STIs.

METHODS

Flick's adaptation of Strauss's grounded theory was adopted. Data is interpreted from a broadly social constructivist perspective.

Recruitment

A convenience sample of heterosexual men and women aged between 45 and 65 years was drawn from two recruitment sites. The socio-cultural basis of the study indicated that non-heterosexual adults merited separately focused enquiry.[13] In the first site, based in a large Scottish urban NHS sexual health service, clinic staff identified attenders who had tested for an STI within the preceding 6 months. Potential participants were offered information about the study and those in agreement were subsequently contacted and invited to take part in a single individual interview. The second recruitment site involved two local council community sport and leisure facilities. The study was promoted among target-age users of the facilities within the public areas and in fitness classes. Potential participants were informed about the study; those who agreed to receive further information were contacted by telephone or email and screened for inclusion. To incorporate a wide range of experiences, eligible community-based participants were those who had changed sexual partner within the preceding five years and had not attended a sexual health clinic during this time.

Following written consent, interviews averaging 90 minutes in length were conducted either at participants' homes, an NHS sexual health clinic or the university. Interviews took place between October 2012 and October 2013. The majority [n=28] were face to face; three took place by telephone. All participants were interviewed alone.

Data collection

Like most phenomenologically inspired approaches to data collection, Flick's episodic interviewing technique focuses upon eliciting in-depth experiential accounts as contextualised within the participant's narrative. Box 1 describes how it was used within the current study. Interviews concentrated on specific experiences over the course of participants' lives where they had sex with a new partner, focusing on consideration of risk for STIs. All interviews were recorded, transcribed in full and anonymised. Field notes were written following each interview.

Phase 1: introduce the concept of the episodic interview
I will ask you several times to talk about events and your experiences from the past and present around the subject of sexual health
I will ask you about your opinions on some subjects
Phase 2: Participants 'impression of the topic
When you think about the idea of sexual health, what comes to mind?
What comes to mind when you hear the phrase 'sexually transmitted
Infections'?
Phase 3:The meaning of the topic in everyday life
Can you tell me what role sexual health has in your present life?
Can you give me an example?
Thinking about how important you consider your sexual health to be now, in what way, if any, does this differ from when you were younger?
Can you tell me about a time when your own sexual health took on a significant meaning?
Phase 4: Main focus on the topic
What is your understanding of risk taking for STIs?
Do you have an example from your own experience?
Can you tell me about a more recent time within the last 5 years when you had sex with someone for the first time?
Can you tell me about any thoughts you had about STIs at that time?
Can you talk about what actions you took for risk for STIs on that occasion?
What were the circumstances leading to that particular outcome?
Phase 5: More general topics
What do you think the main issues are for older adults who are thinking about having sex with new partners?
What might help older adults take care of their sexual health?
Phase 6: Concluding the interview
Phase 7: Debriefing

Box 1: Extract from interview schedule showing use of Flick's episodic interviewing technique

Analysis

Data from all participants were cleaned and combined into one data set. We used inductive thematic analysis as a core analytic technique; we identified initial codes within the transcripts, paying attention to literal, interpretive and reflexive meanings within the texts (15, 16) Codes were then iteratively developed into preliminary themes, moving from a single transcript across the data set using constant comparison to maintain the coherence of each theme. Memos, summary statements and constant interrogation of the data facilitated the development of the final abstract higher level themes (see figure 1). Validity was achieved through audit of JD's coding by KL, JB and PF, maintenance of a coding journal providing an audit trail of coding decisions, a reflexive analytical approach, and the repeated revision of codes and checking of themes against original data.

	Recruitment sites		
	NHS sexual health clinics	**Community sport and leisure facilities**	**Total**
Age			
45-54	8	11	19
55-65	7	5	12
Gender			
female	11	7	18
male	4	9	13
Relationship status			
divorced	7	5	12
separated	2	2	4
widowed	0	4	4
currently single	9	5	14
currently in a relationship	6	11	17
SIMD*‡			
1 & 2	10	9	19
3-5	5	6	11

** 1 not given. ‡ SIMD divides Scotland into datazones of about 800 people and provides detailed information on areas of deprivation, based on employment, health, education, skills, geography, crime and housing (Scottish Government, 2015).*

Table 1: participant demographic details

Results

Interviews were conducted with 19 women and 13 men (n=31); 15 with sexual health clinic attendees and 16 with community setting participants, as outlined on table 1. The majority (n=19) lived in Scottish Index of Multiple Deprivation (SIMD) postcode areas 1 and 2 indicating the most deprived populations. All bar one of the participants were British citizens; two participants were of BME status, reflecting the local population.[17] Most participants (n=23) had experienced divorce, bereavement or separation. Most of the NHS recruited participants had recently attended the clinic with symptoms; of the few who had a perceived STI risk, most had attended previously with symptoms or partner notification. Two main and two subthemes were identified detailing key factors experienced as influencing sexual risk-taking behaviour for STIs. Each is described below. The quotations in box 2 illustrate the findings.

1. The prioritisation of intimacy above and beyond concerns about risks for STI in sexual partnerships

Within the participants' accounts of midlife sexual partnerships, the need for intimacy prevailed over concerns around transmission of STIs. Prior to recent unprotected sex with a new partner, most participants, both men and women, relied on a range of factors which fostered feelings of reassurance. These included experiences of feeling cared for, good communication, perceptions of fidelity and expectations of low risk arising from understandings of partners' history. Reassurance also came from indications that a new partner had had few previous partners, long previous relationships or had recently spent time alone. Very few men and women, across both clinic and community samples used condoms for sex with a new partner, or tested for STIs prior to sex.

Participants described a key binary shaping sexual risk: overall feelings of reassurance and safety from STIs were associated with intimacy whilst feelings of risk were associated with a lack of intimacy. Monogamy was therefore constructed as both the ideal and safest kind of sexual relationship. Equally, casual sex was mostly associated with stigma and increased risk of STI. Participants' motivation to seek intimate and monogamous relationships, or their sense of emotional connection with new sexual partners, lent feelings of reassurance and safety to their actual exposure to STIs/risky sexual conduct. Equally, the stigma regarding casual sex and associated STI risk was often managed by linking engagement in casual sex with younger age, having been in a vulnerable "transitioning" post relationship period or, for several participants, within the context of drinking alcohol. Of note, women felt more stigma in relation to casual sex than men. Women who engaged in casual sex were perceived by both men and women as lacking in 'self-respect'.

2. The importance of unwanted pregnancy in shaping risk perceptions throughout the life course

Unwanted pregnancy was viewed as a major risk associated with unprotected sex. It was common for men and women to recall pregnancy as the main or only perceived negative outcome from sex during their younger years. In contrast, many remembered STIs as heavily stigmatised and irrelevant to their lives. While many participants described an increased awareness of STI-related risk across their life course, pregnancy continued to dominate as the major perceived risk for over half of the men and women in the study. For several men and women, once pregnancy risk had dissipated through sterilisation or menopause, there was no perception of STI risk at all. In addition, over half of the men and women had either rarely or never used condoms when young or used them purely for contraception; only one woman had subsequently used condoms with recent partners.

3. Vulnerability associated with periods of relationship transition

It was common for both men and women to describe a process of adjustment following the end of long-term relationships. During this period, they described a sense of vulnerability expressed through guilt and loss of self-esteem after bereavement, divorce or separation. Emotional rather than health needs were, therefore, prioritised, resulting in unprotected sex with new partners. In addition, several men and women experienced a loss of confidence in exposing their ageing bodies to new sexual partners, which also side-lined concerns about safer sex. Some felt they had to adjust to a new sexual culture, epitomised by expectations of a fast progression to sex after meeting a new partner. In contrast, a few participants felt a sense of freedom in embarking on new mid-life sexual encounters, linking their experiences with feeling young again. The absence of vulnerability and risk experienced among those adults meant that safer sex was not considered. These findings suggest that transitions, regardless of the emotional cost, create a risk for older adults emerging from long-term relationships.

4. Social norms and cultural expectations relating to age appropriate sexual and health-seeking behaviours

Perceptions of what was appropriate sexual behaviour for one's age were highlighted by over half of the participants, including both men and women. These focussed around themes of maturity, that older people "should know better" and distancing from young people. Self-blame featured a great deal across interviews, mostly among women, many describing themselves as 'silly' or 'stupid' for having recently put themselves at risk for STI. Self-blame appeared to have created barriers for some participants against seeking help with STI-related concerns, thus limiting opportunities for advice and information, as well as testing and treatment. In addition to self-blame, most men and women distanced themselves from young people's sexual behaviour, viewing the latter group as at risk for STIs, irresponsible or both. The association of risky sexual behaviour with young people appeared to create conflict for those who had attended the sexual health clinic. The clinic waiting area appeared to represent an environment where participants had to simultaneously confront their sexuality, their risk-taking and their age in relation to others.

Box 2: FINDINGS (all names are pseudonyms)

1. **The prioritisation of intimacy above and beyond concerns about risks for STI in sexual partnerships**

It didn't enter my thinking at all. I'm basically a trusting person. If I think I can trust somebody, I wouldn't have a relationship with somebody I didn't trust and as I said to you earlier, when I met this person I we immediately realised that we were well suited. There's something when you meet somebody, you can feel, its difficult to explain, you feel you're comfortable with this person

so you don't feel you need to think about anything, but it didn't' enter my head to discuss anything to do with sexually transmitted diseases or anything at all, cos anything that's in the past is in the past and it never entered my head. Seems a bit naïve doesn't it when I say it like that.
Rory (age 55-65, widowed, non-co-habiting relationship, community)

2. The importance of unwanted pregnancy in shaping risk perceptions throughout the life course

I like to get to know someone before I would even consider like spending the night with them ….but once you get into that position where you are comfortable and you're easy with someone…maybe if you're planning to …say 'OK we'll stay over together' or something, then you would say 'right', you should be able to just say 'right I think we should use a condom ' or whatever. But… sometimes, when you get carried away you end up you don't. I don't tend to dwell on it and think 'oh my goodness what have I done?'. Because I know that years ago when you are …of a reproductive age you would think really twice; but when you know that the consequences aren't going to be a baby, maybe you don't think so hard about it
Gillian (age 55-65, single, NHS sexual health clinic, telephone interview)

3. Vulnerability associated with periods of relationship transition

A. Prioritising emotional needs

My state of mind, too soon after, …very guilty, very very guilty, and probably that's what I was thinking. Sexual diseases never came into it because I had too much going on in there with other things… and that was my wife… and just [laughs] losing your confidence actually. You've been with somebody for twenty-one years and then you're suddenly … with somebody new and you're an old man …and the first time I was, I was twenty stone. Not a pretty sight [laughs]. So I suppose I had all these kind of things- so sexual diseases is at the back of the list
Sam (age 45-54, widowed, community)

B. Emerging into a changed culture

*And when women dae (do) that, as a man when she says 'would you mind coming to mine for a wee tea', it's hard to say no, telling you, anybody that does say no; and especially if you're single and you get that opportunity and she's wanting to go 'I'm gonnae jump (*have sex with*) him tonight'. This is the way they talk now-I don't know all this. This is all new to me when I hear all this stuff. When I started going out, naebody done that, 'I'm gonnae take you home and I'm going to have sex with you'. I had to get women up on the dance floor and have 3 dances with them just to know if they liked me; and women are now going 'I'm gonnae jump him', and I'm like that- that's what they dae now*
James (age 45-54, separated, non-cohabiting relationship, community)

C. A sense of freedom

And so that period after we'd split up you know it was, I could do what I wanted. Free, as my ex-wife could be …through that period of time again it was a wee bit (like) going back to a teenager because I just realised there was all these women out there and I wasn't actually going out to seek them. I was older so … the signals were easier to detect… Maybe I should be going to the dancing or going to a club… I'm not a club person. I would just sort of meet them and fine, you know; but still, eh, I was aware of …you can't just go and spread your… spoiled seed. You have to think about what you're gonnae do, but you don't always think, I didn't always think
Matthew (age 45-54, divorced, community)

4. Social norms and cultural expectations relating to age appropriate sexual, and health

seeking, behaviours

A. Appropriate behaviour

*Aye when folk get to my age, or roughly my age, life experience has taught them, you don't get pished (*drunk*)and wake up with a stranger*
Raymond age 54, divorced, community, telephone interview

B. Self-blame

First and foremost I felt dirty; I felt a woman of my age, why have you let this happen, you know; and then just felt so disheartened with myself for letting it get that far. I've got myself to blame, obviously
Margaret (age 55-65, divorced, NHS sexual health clinic)

C. Distancing from young people

A lot of people I think would be embarrassed going into the clinics because they're older and the young ones don't like to think that, "what are they doing here? They shouldn't be having sex at that age." But people have sex up until their 90s [laughs]. It's not about age… but it's, I think the stigma of being older and going in these places is frightening, it's a bit scary.
Amanda (age 55-65, single, NHS sexual health clinic)

DISCUSSION

This is the first UK study to explore the social context of middle-aged heterosexual adults' risk taking for STIs and provide a significant contribution to explaining recent epidemiological data highlighting increasing STI within this group. Key findings suggest that several psycho-social and socio-cultural factors have the potential to impact on the sexual health of middle-aged heterosexual adults. Middle-aged adults of both genders were found to prioritise intimacy over concerns about STI risk. This finding extends USA-based evidence among younger women,[18] suggesting that, contrary to what might be assumed regarding life experience, middle-aged adults, similar to young people, attribute value judgements to STIs, basing the potential for risk on the relational aspects of sexual encounters. Interventions should, therefore, utilise the centrality of the desire for intimacy, acknowledging that single sexual encounters might not be viewed as casual sex. Highlighting the asymptomatic nature of many STIs may facilitate understandings that authentic, emotionally committed partnerships are not necessarily risk-free. Interventions should also challenge perceptions of women lacking self-respect, a fiction that has been shown among young people to maintain STI risk.[19]

Unwanted pregnancy was identified by both men and women as the major overriding risk associated with unprotected sex. This study extends the existing evidence based on women,[20,21] by finding that men also associate pregnancy avoidance with safer sex across the life course. The diminishing of

pregnancy risk with age exposes the absence of STI concern, its legacy as the only adverse outcome from unprotected sex continuing to influence perceptions of risk among middle-aged adults. The success of the contraceptive pill in protecting against pregnancy may have had a deleterious effect on condom use for this generation when younger.[22] Regarding STI control, the association of condoms with short term or casual sex reduces their currency. The option of hiding behind the more socially acceptable use of condoms as contraception as expressed by Holland *et al.*[23] is not available to post-menopausal female participants. Older adults, apart from overcoming stigmatised norms associated with condoms, must reintroduce them when either sterility or effective contraception have defeated their original purpose and many years of non-use have intervened. Changing the focus of condoms from contraception to infection control necessitates acknowledging STI avoidance as their only purpose. The legacy of pregnancy as the dominant negative outcome of sex, therefore, presents a challenge to adults for whom, paradoxically, it is seldom a risk.

Transition from disrupted relationships involving death, divorce or separation led to increased risk taking through unprotected sex with new partners. Several findings from this study echo existing USA based qualitative work, mainly focused on women and HIV. Participants felt they had to adjust to an unfamiliar sexual culture with new 'rules'.[24] In addition, it was difficult to break the familiar old habits of unprotected sex within long-term relationships.[12] Finally, prioritising women's emotional needs following relationship disruption impacted on STI avoidance.[9] This study adds to existing evidence by demonstrating the experiences of older men, whose emotional needs were also prioritised over STI concern during transitional periods. This strengthened evidence on transitional risks indicates the need to target health promotion interventions towards middle-aged adults following long-term relationship disruptions.

Both men and women believed older adults should demonstrate maturity in comparison to young people, who were viewed as irresponsible and at risk for STIs. These findings support earlier associations between lifestyle and life course highlighting the strength of cultural norms regarding the appropriate stage in life for certain behaviours.[25] The absence of visible public images validating expression of sexuality among older adults may continue the public perception of their asexuality and by extension, the assumed irrelevance of STIs in their lives. Therefore, interventions focussed on younger adults are likely to have limited resonance among this older population. While stigma has also been shown to affect young people attending sexual health services,[26] this study shows concerns linked with being older that highlight additional barriers to accessing and using those services. Difficulties have been demonstrated among adults over 50 and their health care providers in raising sexual health concerns in a wider context.[27] This study suggests that the

combination of age and STI related stigma may lead to self-exclusion from sexual health services. Interventions should take cognisance of age-related stigma; directly targeting middle aged and older adults would validate expressions of sexuality among this group.

Limitations

This study is based on a small convenience sample of heterosexual adults, with limited ethnic diversity. Participants were difficult to recruit. Of the 282 participants who agreed to be contacted, 122 (43%) did not meet the inclusion criteria and a further 149 (52%) self-excluded or were uncontactable. Of note, over a third of participants had experienced domestic and sexual violence both as adults and as children. These experiences may have contributed to the emergence of the themes of vulnerability at transition and prioritisation of intimacy. It must, however, be considered that almost 10% of women in Britain aged up to 74 and 1.5% of men have experienced non-volitional sex [28] and a third of women have experienced violence or sexual violence in Europe. (29) While data saturation was not a methodological requirement of this thematically driven study, it was achieved with the major overarching themes, but not for the whole data set due to the heterogeneity of issues raised by participants (a product of the episodic approach taken to data collection which elicits more idiographic phenonema). Additional subthemes which could be developed further in future studies include older adults' engagement with STI-related knowledge and the role of parenting in relation to risk reduction. The recruitment strategy did, however, facilitate access to participants from the most deprived SIMD areas, enabling the voices of those most likely to be in need of sexual health care to be heard. In addition, the selection of an inductive qualitative approach enabled thick, detailed descriptions, affording insights into the perceptions of middle-aged adults.

CONCLUSION

Although concepts of sexuality across the life course have recently been introduced into public policy literature, notably in the Department of Health's Framework for Sexual Health Improvement in England,[30] heterosexual adults in mid-life and beyond have been underserved in terms of research, clinical practice and public health focussed interventions in response to rising rates of STIs. In the light of the increasing population age, this is an area requiring attention. Although within this study, perceptions of age appropriateness served to impact on sexual risk taking, other factors, including intimacy, transitioning from relationships and pregnancy concerns are in evidence across the life course. Collectively, these findings pose problems for some health promotion approaches

that merely present facts to older adults; such an approach may not be enough to reduce sexual-risk taking at this point in the life course.

Adoption of a life-course approach to sexual health may challenge perceptions both among older adults and within the wider population that sexuality is compartmentalised within age-appropriate bands. Working to destigmatise older adults' sexuality could undermine age-related understandings of risk and influence access to sexual health services. The development of an evidence based research programme structured around life-course events including transition from long-term relationships is suggested as a starting point for this process.

KEY MESSAGES

- Psycho-social factors, including prioritising intimacy, pregnancy, transitioning from relationships and perceptions of age appropriate behaviour, influence risk taking for STIs among middle-aged heterosexual adults.
- The prioritization of intimacy and pregnancy over STI concerns affect adults across the life course.
- Assumptions about age-appropriate behaviour may inhibit help seeking for STIs among adults in late middle age.
- Interventions based on transitioning out of long-term relationships may address risk taking among both older and younger adults.

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Contributors: JD designed the study, undertook recruitment, conducted all interviews, undertook analysis and drafted the manuscript. KL helped with study design, planning recruitment and audited the analysis. JB helped with recruitment planning and audit of the analysis. PF audited the analysis. All authors edited and approved the final manuscript.

Patient consent: Obtained. Participants were aware that the study was a PhD project and that JD is a sexual health nurse.

Ethical approval: Glasgow Caledonian University School of Health and Life Sciences Ethics Committee (B11/81), West of Scotland Research Ethics Committee 4 (12/WS/0247).

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REFERENCES

1. Minichiello V, Rahman S, Hawkes G, et al. STI epidemiology in the global older population: emerging challenges. *Perspect Public Health* 2012; 132(4):178-81.

2. Public Health England. Table 2: STI diagnoses and rates by gender, sexual risk and age group, 2010-2014: https://www.gov.uk/government/statistics/sexually-transmitted-infections-stis-annual-data-tables (accessed May 2016)

3. Public Health England. HIV in the United Kingdom: 2014 Report 2014: PHE. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/401662/2014_PHE_HIV_annual_report_draft_Final_07-01-2015.pdf (accessed June 2016)

4. Office for National Statistics. Population estimates by marital status and living arrangements: England and Wales, 2002-2014. Statistical bulletin: 8th July 2015: http://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/bulletins/populationestimatesbymaritalstatusandlivingarrangements/2015-07-08 (accessed May 2016)

5. Mercer CH, Tanton C, Prah P, et al. Changes in sexual attitudes and lifestyles in Britain through the life course and over time: findings from the National Surveys of Sexual Attitudes and Lifestyles (Natsal). *Lancet* 2013; 382(9907):1781-94.

6. Field N, Mercer CH, Sonnenberg P, et al. Associations between health and sexual lifestyles in Britain: findings from the third National Survey of Sexual Attitudes and Lifestyles (Natsal-3). *Lancet* 2013; 382(9907):1830-44.

7. Lee D, Nazroo J, O'Connor D, et al. Sexual health and well-being among older men and women in England: findings from the English longitudinal study of ageing. *Arch Sex Behav* 2015:1-12

8. Office for National Statistics. Health expectancies at birth and at age 65 in the United Kingdom, 2008-2010: Statistical bulletin: 29th Aug 2012: http//:www.ons.gov.uk/ons/rel/disability-and-health-measurement/health-expectancies-at-birth-and-age-65-in-the-united-kingdom/2008-10 (accessed January 2016)

9. Lichtenstein B. Starting over: dating risks and sexual health among midlife women after relationship dissolution. In: Carpenter L, DeLamater J, eds. Sex for life: from virginity to Viagra, how sexuality changes throughout our lives. New York: New York University Press 2012: 180-197.

10. De Visser R, Badcock P, Rissel C, et al. Safer sex and condom use: findings from the Second Australian Study of Health and Relationships. Sex Health 2014; 11: 495–504.

11. Jackson F, Early K, Schim SM, et al. HIV knowledge, perceived seriousness and susceptibility, and risk behaviors of older African Americans. J Multicult Nurs Health. 2005; 11(1):56-62.

12. MacDonald J, Lorimer K, Knussen C, et al. Interventions to increase condom use among middle-aged and older adults: A systematic review of theoretical bases, behaviour change techniques, modes of delivery and treatment fidelity. *J Health Psychol* 2015.

13. Stall R, Hart G. The continuing evolution of research on sexually transmitted infections among men who have sex with men. *Sex Transm Infect* 2008; 84(6): 407-409.

14. Flick U. The episodic interview: small scale narratives as approach to relevant experiences. London School of Economics Methodology Institute: Discussion papers-qualitative series 1997: http://www.lse.ac.uk/methodology/pdf/qualpapers/flick-episodic.pdf (accessed January 2016)

15. Flick, U. 2009. An introduction to qualitative research, 4th edn, SAGE, London.

16. Mason, J. 2002. *Qualitative Researching,* 2nd edn*,* SAGE, London.

17. Scottish Government. 2015. Summary: ethnic group demographics 2011(online). Scottish Government, Edinburgh. Available at: http://www.gov.scot/Topics/People/Equality/Equalities/DataGrid/Ethnicity/EthPopMig (accessed June 2016).

18. Matson PA. The role of feelings of intimacy on perceptions of risk for a sexually transmitted disease and condom use in the sexual relationships of adolescent African-American females. *Sex Transm Infect* 2012; 88(8):617-21.

19. Marston C, King E. Factors that shape young people's sexual behaviour: a systematic review. *Lancet* 2006; *368* (9547):1581-1586

20. Watson WK, Bell NJ. Narratives of development, experiences of risk: adult women's perspectives on relationships and safer sex. British J Health Psychol, 2005; 10(3):311-327.

21. Mallory C, Harris G, Stampley C. Midlife African-American women's protective and risky practices related to HIV, J *Adv Nurs* 2009; 65(6): 1248-1258.

22. Maxwell C, Boyle M. Risky heterosexual practices amongst women over 30: Gender, power and long term relationships. *AIDS Care* 1995; 7(3):277-94.

23. Holland J, Ramazanoglu C, Sharpe S, et al. The male in the head: young people, heterosexuality and power 2nd edn. London: Tufnell Press: 2004.

24. McCord LR. Attention HIV: older African American women define sexual risk. *Cult Health Sex* 2013; 16(1):90-100.

25. Backett KC, Davison C. Lifecourse and lifestyle: the social and cultural location of health behaviours. *Soc Sci Med (1982)* 1995; 40(5):629-638.

26. Mulholland E, Van Wersch A. Stigma, sexually transmitted infections and attendance at the GUM Clinic: an exploratory study with implications for the theory of planned behaviour. *J Health Psychol* 2007; 12(1):17-31.

27. Hinchliff S, Gott M. Seeking medical help for sexual concerns in mid- and later life: a review of the literature. *J Sex Res* 2011; 48:106-7.

28. Macdowall W, Gibson L, Tanton C, et al. Lifetime prevalence, associated factors, and circumstances of non-volitional sex in women and men in Britain: findings from the third National Survey of Sexual Attitudes and Lifestyles (Natsal-3). *Lancet* 2013; *382*(9907):1845-1855.

29. European Union Agency for Fundamental Rights (FRA). 2014. Violence against women: an EU wide survey. Main results report (online). Available at: http://fra.europa.eu/en/publication/2014/violence-against-women-eu-wide-survey-main-results (accessed June 2016)

30. Department of Health. A framework for sexual health improvement in England 2013: Department of Health. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/142592/9287-2900714-TSO-SexualHealthPolicyNW_ACCESSIBLE.pdf